

Patent Application No. 10/804,430
Amendment A in response to
Office Action mailed November 15, 2005
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REMARKS/ARGUMENTS

Applicants wish to thank the Examiner for the careful review of the claims, specification, and drawings.

In response to the Office Action mailed November 15, 2005, independent claims 1 and 21 have been amended.

Dependent claims 2-3 and 22-23 have been canceled.

Dependent claims 4, 16, 24, and 35 have been amended.

After entry of this amendment, claims 1, 4-21, and 24-39 are pending.

It is respectfully submitted that each and every feature recited in the amended claims and/or new claims are fully supported in the specification as filed. No new matter has been added.

Rejections under 35 USC 102

The Office Action rejected claims 1-2, 5-8, 13, 15, 17, 20-22, 25-27, 32, 34, 36, and 39 are rejected under 35 USC 102(e) as being anticipated by Soda et al (US 2003/0190807), hereinafter "Soda."

Claims 1-20

Applicants would like to thank the Examiner for the indication of allowable matters in claims 3-4.

Applicants hereby incorporate the limitation of allowed claim 3 into independent claim 1. Claim 3 is hereby canceled.

Since claim 3 is dependent upon claim 2, the limitation of claim 2 is hereby incorporated into independent claim 1. Claim 2 is hereby canceled.

Hence, applicants have amended independent claim 1 to require, in the manner claimed, that the alternatively etching process of a substrate includes etching partially through a low-k layer and a first barrier layer with a second etchant.

Also, dependent claims 4 and 16 have been amended to address an antecedent problem.

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Accordingly, amended independent claim 1 should now be allowed. Furthermore, the pending claims that depend from amended claim 1 (i.e., dependent claims 4-20) should also be patentable due to their dependence from the patentable parent claim. Alternatively or additionally, these dependent claims are novel, nonobvious, and patentable due to their independent recitations of independently patentable features.

Claims 21-39

Applicants would like to thank the Examiner for the indication of allowable matters in claims 23-24.

Applicants hereby incorporate the limitation of allowed claim 24 into independent claim 21. Claim 24 is hereby canceled.

Since claim 23 is dependent upon claim 22, the limitation of claim 22 is hereby incorporated into independent claim 21. Claim 23 is hereby canceled.

Hence, applicants have amended independent claim 21 to require, in the manner claimed, that the alternatively etching process of a substrate includes etching partially through a low-k layer and a first barrier layer with a second etchant.

Also, dependent claims 24 and 35 have been amended to address an antecedent problem.

Accordingly, amended independent claim 21 should now be allowed. Furthermore, the pending claims that depend from amended claim 21 (i.e., dependent claims 24-39) should also be patentable due to their dependence from the patentable parent claim. Alternatively or additionally, these dependent claims are novel, nonobvious, and patentable due to their independent recitations of independently patentable features.

Rejections under 35 USC 103(a)

The Office Action rejected claims 9-10, 12, 14, 28-29, 31, and 33 under 35 USC 103(a) as being unpatentable over Soda et al. in view of Daniels et al. (US 6,583,047), hereinafter "Daniels." The Office Action rejected claims 11, 16, 30, and 35 under 35 USC 103(a) as being unpatentable over Soda et al. in view of Gates et al. (US 6,716,742), hereinafter "Gates." The Office Action rejected claims 18, 19, and 37-38 under 35 USC 103(a) as being unpatentable over Soda et al. in view of Tang et al. (US 2001/0000246), hereinafter "Tang."

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The cited arts (Soda, Daniels, Gates, and Tang) relied on by the Examiner, alone or in combination, still fail to disclose or suggest, in the manner claimed in amended independent claims 1 and 21, e.g., at least the feature of an alternatively etching process in which the low-k layer and the first barrier layer are partially etched.

For the aforementioned reasons and others, it is respectfully submitted that the pending claims are novel, non-obvious, and patentable over the cited art of record, taken alone or in combination.

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Conclusion

In view of the discussion herein, Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at 408-257-5500.

If any petition is required to facilitate the entry of the present amendment, please consider this communication a petition therefore as well. The Commissioner is authorized to charge any fees beyond the amount enclosed which may be required, or to credit any overpayment, to Deposit Account No. 50-2284 (Order No. LMRX-P032).

Respectfully submitted,

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